

Claims

1. Arrangement for distributing data for device drivers, in particular printer drivers, in a computer network, which has three or more connected computers as nodes (a, b, c, d) of which at least one is connected as a so-called peripheral server computer (b) to one or more peripheral devices, e.g. printers, for their administration and activation, characterised in that at least two (a, c) of the computers are each provided with a driver server module, which is formed for receiving driver data or information for printer or other device drivers and for their administration and transfer to other computers (b, d), and are in communication with at least two driver server modules of different computer nodes (a, c) and are thus dominatingly coupled hierarchically with one another according to the master/slave principle, and the computer node (c) is connected by the hierarchically subordinate driver server module to the at least one peripheral server computer (b) for transferring the driver data to the latter.
2. Arrangement according to claim 1, characterised in that the driver server modules of one or both computers (a, c) are formed for receiving individual configuration data files or data sets which are intended for setting a printer or other device driver, and for administrating and transferring these configuration data files or data sets to other computers (b).
3. Arrangement according to claim 1 or 2, characterised in that the peripheral server computer (b) and/or at least one computer (a, c) is provided with a driver server module having one or more modules for automatically installing one device driver each.
4. Arrangement according to one of the preceding claims, characterised in that the peripheral server computer (b) is arranged by programming to

request as a client from the driver server module communicating therewith, data for device drivers and/or configurations automatically or by user input and/or to receive the same upon update initialisation of a driver server module.

5. Arrangement according to one of the preceding claims, characterised in that a driver server module which is superordinate to another is coupled to a memory of a predetermined quantity of different device driver and/or device configuration data and is set up to transfer to the subordinate driver server module only part of the stored device driver data and/or configuration data.
6. Arrangement according to one of the preceding claims, characterised by a computer node (d) provided with a graphic user interface (GUI) for the central administration of the hierarchical transfer and distribution of the device driver data and device configuration data between the computer nodes (a, b, c, d) including the peripheral server computer (b) and/or between the driver server modules and optionally the installation modules on the peripheral server computers (b).
7. Arrangement according to one of the preceding claims, characterised by an auto-repair module, which is in communication with the peripheral server computer(s) (b) and optionally at least one of the driver server computer nodes (a, c), which is set up and formed for fault recognition and elimination thereof by repeated transmission of driver data and/or individual configuration data files for printers or other devices.
8. Arrangement according to one of the preceding claims, characterised by a tree-like structure of the computer nodes (a, b, c), the uppermost node or root node (a) being provided with a master driver server module, which dominates all further slave driver server modules connected thereto of downstream computer nodes (c) in the master/slave hierarchy

in order to transfer data for device drivers and configurations of the computer network thereto.

9. Arrangement according to claim 8, characterised in that the master driver server module (a) and optionally also the slave driver server module (c) are each provided with a memory region (DB) for inventorising and sending data for all device drivers and configurations of the computer network.
10. Arrangement according to claim 8 or 9, characterised in that the peripheral server computers (b) form the lowest level or the lowest or end nodes of the tree-like structure.
11. Arrangement according to one of the preceding claims, characterised by a plurality of driver server modules of the same order in the hierarchy or computer nodes (c) provided therewith, with which one or more peripheral server computers (b) communicate in order to receive device driver data or device configuration data.
12. Arrangement according to one of the preceding claims, characterised in that a subordinate slave driver server module or a computer node (c) provided therewith is provided with data for device drivers and device configurations of the computer network, which are different from those of the superordinate master server driver module or of the computer node (a) provided therewith.
13. Arrangement according to one of the preceding claims, characterised in that at least one of the computer nodes (a, c) having a respective driver server module is provided itself with one or more modules for installation of a respective device driver.

14. Computer node (a, c) with a driver server module for the arrangement according to one of the preceding claims, having a local mass memory or other local, non-volatile permanent memory (DB), characterised by saving of the device driver data and optionally of the individual configuration data files for printer or other device drivers entirely or in part in the mass memory or permanent memory (DB), and by a driver grouping and/or assembly data file further saved therein having data representing the information about a directory of device drivers or device individual configurations kept available, about memory locations for the driver data or individual configuration data files, about allocations of the device drivers to peripheral server computers (b) or other peripheral components and/or about names or addresses of hierarchically subordinate driver server modules or computer nodes (c) or peripheral server computers (b) provided therewith.
15. Computer node according to claim 14, characterised in that in its mass and/or permanent memory a database (DB) is applied, in which driver or configuration data of different printer or other different device drivers are saved.
16. Computer node according to one of the preceding claims, characterised in that thereon the stored device driver data and optionally device configuration data are at least partially not installed or not capable of running.
17. Computer node according to one of the preceding claims, characterised in that at least part of the device drivers stored on the computer node (a, c) and administrated by the driver server module thereon is not compatible with the operating system of the computer node (a, c).
18. Computer program for realising the driver server module on a computer node(a, c) for the arrangement according to one of the preceding claims,

characterised by program code elements for carrying out the functions of the driver serve module, as is indicated in claims 1, 2, 4, and/or 5.

19. Computer program having program code elements according to claim 18, which are loaded in a computer memory, stored on a computer-readable data carrier, or are contained in an electrical carrier signal, optionally so as to be downloadable.
20. Peripheral server computer (b) for the arrangement according to one of the preceding claims, having one or more modules for automatic installation of a respective device driver, characterised in that the at least one driver installation module is coupled to a memory region for a grouping and/or assembly data file, whose data represent information at least about a driver server module allocated to or superordinate to the driver installation module.
21. Peripheral server computer (b) according to claim 20, characterised in that the assembly data file contains information about time intervals within which received or allocated device drivers are to be updated.
22. Peripheral server computer according to claim 20 or 21, characterised in that the driver installation module is formed with a functionality for monitoring device driver installations for accuracy.
23. Peripheral server computer according to claim 21, characterised in that the driver installation module is formed with an auto-repair routine which may be triggered by the fault monitoring functionality for the repair installation of a device driver concerned.
24. Graphic user interface (GUI) for the arrangement according to claim 6 and optionally one of the other claims, characterised by the driver server modules or the computer nodes (a, c) provided therewith and the read

and write interfaces optionally allocated to the peripheral server computers (b) for carrying out functions of administration of plural driver server modules and optionally plural peripheral server computers with respect to their one or more device drivers and/or configurations, in that these interfaces are formed for access to memory regions (DB) which act as sources or sinks for data of the device drivers or configurations for the driver server modules or the computer nodes (a, c) provided therewith and optionally for the peripheral server computers.

25. Computer program having program code elements for realising the graphic user interface (GUI) according to claim 24.
26. Computer program having program code elements according to claim 26, which are loaded in a computer memory, are stored on a computer-readable data carrier or are contained in an electrical carrier signal, optionally so as to be downloadable.